

the general health and comfort of the patient can be vastly improved.

*Treatment.*—The initial step is always to thoroughly cleanse the nasal and naso-pharyngeal cavities. That is, to remove completely all incrustations wherever found. It matters little how this is accomplished, or what local agents are used, so long as the mucus membrane remains unbroken and the eustachian tubes uninjured. The drugs used are legion, and the methods many. Among the best, however, are simple alkaline and antiseptic solutions, such as Dobell's. The alkali has a solvent action upon mucus, while the carbolic acid has a tendency to neutralize the decomposition going on. This, or any similar fluid, may be used by the post-nasal spray syringe. The point of the instrument, being passed up behind the soft palate, the solution is thrown through the nasal cavities with considerable force. At the same time it loosens the accumulations which so frequently form in the vault of the pharynx. We should always be careful to have our solutions at a blood temperature, and should also fill the instrument a number of times at each sitting.

The method of using the nasal douche, and recommending the patient to pass one or two quarts of hot medicated water through the nose, up one nostril and down the other, is advised by some rhinologists. Bosworth, in his recent edition, tells us that our patients should be instructed to follow this plan out daily. There are unbelievers, however, and I am one of them. With such oft-repeated and copious irrigations, there is always the well recognized danger of frequent floodings of the eustachian tubes. If we flood the tubes we flood the middle ear likewise; and run the serious risk of inflammatory action, and subsequent deafness. Of course, if the patient while using the douche, assumes the right posture, with the head bent forward, and takes the precaution to elevate the palate, and so force the fluid round the septum and out through the other naris, without entering the post-nasal pharynx at all, then the eustachian tubes escape. But granting this to be fully accomplished, the entire object of cleansing has not by any means been secured. The tenacious plugs of foul mucus in the pharyngeal vault have not been touched, much less removed. Hence I believe that this dangerous and ineffectual method of cleansing, should only be used

under exceptional circumstances, in cases under the direct control of the experienced physician.

The anterior nasal spray, however, produced by compressed air on a good hand atomizer, is a valuable adjunct to the post-nasal treatment; but in the majority of instances the two combined are not sufficient to thoroughly cleanse the parts from crusts. They remove a large portion of the accumulations and loosen other parts; but some they have comparatively little effect upon. The work to be completed requires the use of the cotton probe by the anterior nares, and the curved cotton holder to the pharyngeal vault. In first treatments, especially, this should be done in a painstaking and thorough manner; and always by the aid of anterior and posterior rhinoscopy with a good reflected light.

This first step having been accomplished, it is generally conceded that the next one is to stimulate the atrophic membrane to a better performance of its natural function of secretion.

To this end Gottstein recommends plugging the nostrils for twenty-four hours with cotton tampons. This entails a good deal of discomfort to the patient for that period; but on their removal a flow of mucous follows as a result of the pressure stimulation. When the flow subsides, the nasal cavities are cleansed again and fresh tampons inserted. The whole procedure being repeated as frequently and for as long a period as required.

Woakes uses Gottstein's plugs for the purpose of applying powders of a stimulating character to the diseased mucous membrane.

Sajous and MacKenzie advise the use of the galvano-cautery at a white heat passed rapidly over the surfaces.

Lennox Browne also favors the same plan with subsequent insufflations of iodol or iodoform.

Bosworth recommends its use with great caution, as a disease attended by constant contraction would hardly appear to call for much use of a destructive agent. He says, however, that when applied so lightly as to be merely stimulant in its action, a good result is sometimes accomplished by it.

Shurly and Bryson Delaven recommend the galvanic current as a valuable means of treatment—the positive electrode being applied to the nape of the neck, while the negative, wrapped in absorbent cotton, is passed over the mucous membrane.